

Certification Summary Information Report

Manufacturer	Kubota Corporation	Manufacturer Code	KBX
Engine Family	GKBXL719KCC	Certificate Number	GKBXL719KCC-013
Certificate Issue Date	10/22/2015	Certificate Effective Date	10/22/2015
Model Year	2016	CARB Executive Order #	N/A
Certificate Revision Date	N/A	Certificate Revision Number	0

Test Dataset numbers in this file:

General Information

Manufacturer Engine Family	N/A	CSI Type	New Submission
Alternate Trade Names			
Manufacturer Type	Original Engine Manufacturer	Branding Arrangement	--
List Of Engine Families Modified	--		
Carry Over from a previous Engine Family?	Yes	Carry Over Engine Family Name	DKBXL719KCC
Running Change(s)	--		
Field Edits			
Mobile/Stationary Application	Mobile	Application Federal Regulation	Part 1039
Application Tier	Tier 4 (Final or Phase In)	Offset Engines	None
		Combining Engines from Multiple Power Categories?	No
Applicable Compliance Standard	Not Applicable	Includes Engines for Electrical Generator set?	No
Power Category	8<=kW<19		
If used for a Stationary Fire Pump, is rated speed > 2650?	No		
Limited Application	Constant Speed Engines		
Limited Application Enforcement Description	Engine speed is to be controlled by fixing either engine speed control lever, or lever of equipment side or solenoid.		

ABT and FEL Information

[REDACTED]

Not to Exceed (NTE) Compliance Information

Ambient Operation Region for NTE Testing

[REDACTED]

NTE Testing and Approach Description

[REDACTED]

Are you petitioning EPA to exclude operating points from NTE Testing because the engine is incapable of operation at those points?

No

Description of how the engine is incapable of operation at the excluded operating points

[REDACTED]

Limit NTE Testing in a single defined region of speeds and loads?

No

Are you requesting approval for an NTE Deficiency

No

Engine Description

Engine Combustion Cycle	4 Stroke Compression Ignition		
Fuel Options	Single Fuel		
Fuel #1			
Fuel	7-15 ppm Ultra Low Sulfur Diesel	Fuel (if other)	--
Fuel Metering System	Indirect Diesel Injection		

Engine Family Comments

Certification Summary Information Report

Engine Family	GKBXL719KCC	Model Year	2016
--			
Useful Life			
Useful Life of the Engine Family	5 years / 3,000 hrs		
Production Information			
Manufacturing plant for these Engines	Kubota Japan		
Agents For Service in US	Zeal Tajpuria		
U.S. Port of Import Name	City	State	
NEW ORLEANS	NEW ORLEANS	Louisiana	
PHOENIX	PHOENIX	Arizona	
NEW YORK	NEW YORK	New York	
DENVER	DENVER	Colorado	
CHICAGO	CHICAGO	Illinois	
LOS ANGELES	LOS ANGELES	California	
MIAMI	MIAMI	Florida	
KANSAS CITY	KANSAS CITY	Missouri	
INDIANAPOLIS	INDIANAPOLIS	Indiana	
TACOMA	TACOMA	Washington	
ATHENS	ATHENS	Georgia	
ATLANTA	ATLANTA	Georgia	
CHARLOTTE	CHARLOTTE	North Carolina	
CLEVELAND	CLEVELAND	Ohio	
ST. LOUIS	ST. LOUIS	Missouri	
SEATTLE	SEATTLE	Washington	
MILWAUKEE	MILWAUKEE	Wisconsin	
MINNEAPOLIS	MINNEAPOLIS	Minnesota	
OAKLAND	OAKLAND	California	
DALLAS	DALLAS	Texas	
LONG BEACH	LONG BEACH	California	
Manufacturer Comments about this Engine Family			
Pure Carryover. (No running change made in 2015MY for this family.) The support documents are same as previous engine family.			

Certification Summary Information Report

Engine Family	GKBXL719KCC	Model Year	2016
Emission Control Systems			
Non-After Treatment Devices			
Are Non-ATDs used on this Engine Family?	Yes	Non-ATD Types	Engine Design Modification
Additional Comments about these Non-ATDs			
After Treatment Devices			
Are After Treatment Devices used on this Engine Family?	<input checked="" type="checkbox"/>	Will Engine Family be produced using Delegated Assembly?	No
Is the Cost of ATD components included in the cost of engine?	--		
List of Components covered under Delegated Assembly exemption			
Are Infrequent Adjustment Factors being used?	--		
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Adjustable Parameters			
Are Adjustable Parameters used with this Engine Family?	Yes		
Adjustable Parameter #1			
Adjustable Parameter Name	Rated Fuel Rate		
Adjustable Parameter Description			
Adjustable Range: +/- 5.0% Tamper Resistance Method: Push-Nut (CARB NCC-2001-014)			

Certification Summary Information Report

Engine Family	GKBXL719KCC	Model Year	2016		
Models and Parts					
Engine Model #1					
Engine Model	D722-D2-EF	Engine Code	D722-D2-EF01		
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.719		
Engine Block Arrangement	Inline				
Number of Cylinders	Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)	
3	67	68	15	3600	
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)	
40.6	3600	3600	40.6	15	
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)	
2700	5	5	15.2	15.2	
Method of Aspiration	Naturally Aspirated				
Number of Aspiration Devices		Aspiration Device Configuration	--		
Turbocharger Type(s)					
Charge Cooler Type	--				
Variable Valve Timing?	No				
Variable Valve Lift?	No				
Number of Inlet Valves per cylinder	1	Number of Exhaust Valves per cylinder	1		
Production and Sales Information					
Sales Area	Both				
Production Start Date			Production End Date		
Engine Parts					
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date	
Fuel Injectors	16001-53002	3	01/01/2016	12/31/2016	
Fuel Injection Pump	16006-51012	1	01/01/2016	12/31/2016	
Fuel Injectors	16871-53002	3	01/01/2016	12/31/2016	
Fuel Injection Pump	17549-51014	1	01/01/2016	12/31/2016	
Fuel Injection Pump	1G820-51013	1	01/01/2016	12/31/2016	
Engine Model #2					
Engine Model	Z482-D2-EF	Engine Code	Z482-D2-EF01		
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.479		
Engine Block Arrangement	Inline				
Number of Cylinders	Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)	
2	67	68	10	3600	
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)	
27.9	3600	3600	27.9	10	
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)	
2700	5	5	15.4	15.4	
Method of Aspiration	Naturally Aspirated				
Number of Aspiration Devices		Aspiration Device Configuration	--		
Turbocharger Type(s)					
Charge Cooler Type	--				
Variable Valve Timing?	No				

Certification Summary Information Report

Engine Family	GKBXL.719KCC	Model Year	2016	
Variable Valve Lift?	No			
Number of Inlet Valves per cylinder	1	Number of Exhaust Valves per cylinder	1	
Production and Sales Information				
Sales Area	Both			
Production Start Date		Production End Date		
Engine Parts				
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date
Fuel Injection Pump	16001-51012	1	01/01/2016	12/31/2016
Fuel Injectors	16001-53002	2	01/01/2016	12/31/2016
Fuel Injectors	16871-53002	2	01/01/2016	12/31/2016
Fuel Injection Pump	17548-51014	1	01/01/2016	12/31/2016
Fuel Injection Pump	1E110-51013	1	01/01/2016	12/31/2016
Engine Model #3				
Engine Model	Z482-D2-EF	Engine Code	Z482-D2-EF02	
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.479	
Engine Block Arrangement	Inline			
Number of Cylinders	Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)
2	67	68	10	3600
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)
26.3	3600	3600	26.3	10
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)
2700	5	5	15.2	15.2
Method of Aspiration	Naturally Aspirated			
Number of Aspiration Devices		Aspiration Device Configuration	--	
Turbocharger Type(s)				
Charge Cooler Type	--			
Variable Valve Timing?	No			
Variable Valve Lift?	No			
Number of Inlet Valves per cylinder	1	Number of Exhaust Valves per cylinder	1	
Production and Sales Information				
Sales Area	Both			
Production Start Date		Production End Date		
Engine Parts				
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date
Fuel Injectors	16001-53002	2	01/01/2016	12/31/2016
Fuel Injectors	16871-53002	2	01/01/2016	12/31/2016
Fuel Injection Pump	17548-51014	1	01/01/2016	12/31/2016
Engine Model #4				
Engine Model	Z482-D2-EF	Engine Code	Z482-D2-EF03	
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.479	
Engine Block Arrangement	Inline			

Certification Summary Information Report

Engine Family	GKBXL719KCC	Model Year	2016	
Number of Cylinders	Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)
2	67	68	10	3600
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)
25.5	3600	3600	25.5	10
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)
2700	5	5	14.7	14.7
Method of Aspiration	Naturally Aspirated			
Number of Aspiration Devices		Aspiration Device Configuration	--	
Turbocharger Type(s)				
Charge Cooler Type	--			
Variable Valve Timing?	No			
Variable Valve Lift?	No			
Number of Inlet Valves per cylinder	1	Number of Exhaust Valves per cylinder	1	
Production and Sales Information				
Sales Area	Both			
Production Start Date				
Engine Parts				
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date
Fuel Injection Pump	16001-51012	1	01/01/2016	12/31/2016
Fuel Injectors	16001-53002	2	01/01/2016	12/31/2016
Fuel Injectors	16871-53002	2	01/01/2016	12/31/2016
Fuel Injection Pump	17548-51014	1	01/01/2016	12/31/2016
Fuel Injection Pump	19007-51014	1	01/01/2016	12/31/2016
Fuel Injection Pump	1E110-51013	1	01/01/2016	12/31/2016
Engine Model #5				
Engine Model	Z482-D2-EF	Engine Code	Z482-D2-EF04	
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.479	
Engine Block Arrangement	Inline			
Number of Cylinders	Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)
2	67	68	9	3600
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)
24.4	3600	3600	24.4	9
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)
2700	5	5	14.2	14.2
Method of Aspiration	Naturally Aspirated			
Number of Aspiration Devices		Aspiration Device Configuration	--	
Turbocharger Type(s)				
Charge Cooler Type	--			
Variable Valve Timing?	No			
Variable Valve Lift?	No			
Number of Inlet Valves per cylinder	1	Number of Exhaust Valves per cylinder	1	
Production and Sales Information				
Sales Area	Both			
Production Start Date				

Certification Summary Information Report

Engine Family	GKBXL719KCC		Model Year	2016	
Engine Parts					
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date	
Fuel Injection Pump	16001-51012	1	01/01/2016	12/31/2016	
Fuel Injectors	16001-53002	2	01/01/2016	12/31/2016	
Fuel Injectors	16871-53002	2	01/01/2016	12/31/2016	
Fuel Injection Pump	17548-51014	1	01/01/2016	12/31/2016	
Fuel Injection Pump	19007-51014	1	01/01/2016	12/31/2016	
Fuel Injection Pump	1E110-51013	1	01/01/2016	12/31/2016	
Engine Model #6					
Engine Model	Z482-D2-EF		Engine Code	Z482-D2-EF05	
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.479		
Engine Block Arrangement	Inline				
Number of Cylinders	Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)	
2	67	68	7	2600	
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)	
26.4	2600	2600	26.4	7	
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)	
1950	5	5	14.3	14.3	
Method of Aspiration	Naturally Aspirated				
Number of Aspiration Devices	Aspiration Device Configuration		--		
Turbocharger Type(s)					
Charge Cooler Type	--				
Variable Valve Timing?	No				
Variable Valve Lift?	No				
Number of Inlet Valves per cylinder	1	Number of Exhaust Valves per cylinder	1		
Production and Sales Information					
Sales Area	Both				
Production Start Date			Production End Date		
Engine Parts					
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date	
Fuel Injection Pump	16001-51012	1	01/01/2016	12/31/2016	
Fuel Injectors	16001-53002	2	01/01/2016	12/31/2016	
Fuel Injectors	16871-53002	2	01/01/2016	12/31/2016	
Fuel Injection Pump	17548-51014	1	01/01/2016	12/31/2016	
Fuel Injection Pump	19007-51014	1	01/01/2016	12/31/2016	
Fuel Injection Pump	1E110-51013	1	01/01/2016	12/31/2016	
Engine Model #7					
Engine Model	Z482-D2-EF		Engine Code	Z482-D2-EF06	
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.479		
Engine Block Arrangement	Inline				

Certification Summary Information Report

Engine Family		GKBXL719KCC		Model Year		2016	
Number of Cylinders		Bore (mm)		Stroke (mm)		Rated Power (kW)	
2		67		68		8	
Maximum Torque (N*m)		Speed at Maximum Torque (RPM)		Maximum Speed Test (RPM)		Torque at Maximum Speed (N*m)	
26.4		3000		3000		26.4	
Intermediate Test Speed (RPM)		Lower Tolerance of Maximum Power (%)		Upper Tolerance of Maximum Power (%)		Fuel Rate at Maximum Torque (mm3/stroke)	
2250		5		5		14.6	
Rated Speed (RPM)		Maximum Engine Power (Kw)		Fuel Rate at Rated Speed (mm3/stroke)			
3000		8		14.6			
Method of Aspiration		Naturally Aspirated					
Number of Aspiration Devices		Aspiration Device Configuration		--			
Turbocharger Type(s)							
Charge Cooler Type		--					
Variable Valve Timing?		No					
Variable Valve Lift?		No					
Number of Inlet Valves per cylinder		1		Number of Exhaust Valves per cylinder		1	
Production and Sales Information							
Sales Area		Both					
Production Start Date				Production End Date			
Engine Parts							
Part Name		Part Number		Part Quantity		Part Usage Start Date	
Fuel Injection Pump		16001-51012		1		01/01/2016	
Fuel Injectors		16001-53002		2		01/01/2016	
Fuel Injectors		16871-53002		2		01/01/2016	
Fuel Injection Pump		17548-51014		1		01/01/2016	
Fuel Injection Pump		19007-51014		1		01/01/2016	
Fuel Injection Pump		1E110-51013		1		01/01/2016	
						12/31/2016	
						12/31/2016	
						12/31/2016	
						12/31/2016	
						12/31/2016	
						12/31/2016	
Durability Information							
DF Determination Factor		Determined by Manufacturer					
Durability Engines							
Engine Name		Engine Code		Engine Id		Engine Service Accumulation in hours	
D1305-EF		D1305-EF01		6L2992		1520	
Deterioration Factors							
Pollutant Name		Deterioration Factor		Deterioration Factor Type			
Carbon Monoxide		0		Steady-State Additive			
Non-Methane Hydrocarbons		0		Steady-State Additive			
Particulate Matter		0		Steady-State Additive			
Nitrogen Oxides		0		Steady-State Additive			

Certification Summary Information Report

Engine Family	GKBXL719KCC	Model Year	2016		
Carryover Test Information					
Test Dataset #1					
Test Data Type	Test data for a current engine model in this Engine Family				
Verify Test Dataset Number	DKBXML0002400	Manufacturer Test Dataset Number	A4620418		
Engine Model	Z482-D2-EF	Engine Code	Z482-D2-EF01		
Engine Id	CE0538	Engine Displacement (in liters)	0.479		
Number of hours Engine was run prior to test	20	Crankcase Emission Discharge Path	CCEs Routed into the Air Inlet System		
Test Date	06/11/2012				
Test Fuel	7-15 ppm Ultra Low Sulfur Diesel				
Special Test Procedure Used	No				
Test Lab Name	Kubota Corporation - EEMPD	Test Lab Code	2		
Engine Operation	Constant Speed	Steady-State Cycle Type	Steady-State 5-Mode Cycle		
Steady-State Modal Testing Type	Ramped-Modal Testing	Transient Test Required	No		
Devices Regenerated during Steady State Test (Ramped Model)	None				
Devices Regenerated during Cold Start of a Transient Test	None				
Devices Regenerated during Hot Start of a Transient Test	None				
Test Comments					
Manufacturer's Assigned Test Data No.: A4620418(RMC) tested on 06/11/2012					
Steady-State Ramped Modal Test Results					
Pollutant Name	Steady-State Pollutant Test Result (Initial)(g/kW-hr)	Certification Emission Result Value (g/kW-hr)	EPA Standard Limit Value (g/kW-hr)	Family Emission Limit Value (g/kW-hr)	Pass/Fail Indicator
Non-Methane Hydrocarbons	0.548	0.55	--	--	--
Nitrogen Oxides plus Non-Methane Hydrocarbons	--	6.0	7.5	--	Pass
Nitrogen Oxides	5.48	5.48	--	--	--
Methane	0.003	0.00	--	--	--
Particulate Matter	0.212	0.21	0.40	--	Pass
Carbon Monoxide	2.517	2.5	6.6	--	Pass
Carbon Dioxide	1012.4	1,012.40	--	--	--

Certification Summary Information Report

Manufacturer	Kubota Corporation	Manufacturer Code	KBX
Engine Family	HKBXL.719KCC	Certificate Number	HKBXL.719KCC-007
Certificate Issue Date	11/21/2016	Certificate Effective Date	11/21/2016
Model Year	2017	CARB Executive Order #	N/A
Certificate Revision Date	N/A	Certificate Revision Number	0

Test Dataset numbers in this file:

General Information

Manufacturer Engine Family	N/A	CSI Type	New Submission
Alternate Trade Names			
Manufacturer Type	Original Engine Manufacturer	Branding Arrangement	--
List Of Engine Families Modified	--		
Carry Over from a previous Engine Family?	Yes	Carry Over Engine Family Name	DKBXL.719KCC
Running Change(s)	--		
Field Edits			
Mobile/Stationary Application	Mobile	Application Federal Regulation	Part 1039
Application Tier	Tier 4 (Final or Phase In)	Applicable Compliance Standard	Not Applicable
Offset Engines	None	Certification based on CARB Executive Order?	No
Combining Engines from Multiple Power Categories?	No	Power Category	8<=kW<19
Includes Engines for Electrical Generator set?	No	If used for a Stationary Fire Pump, is rated speed > 2650?	No
Limited Application	Constant Speed Engines		
Limited Application Enforcement Description	Engine speed is to be controlled by fixing either engine speed control lever, or lever of equipment side or solenoid.		

ABT and FEL Information

Participating in Averaging,		Alternate Family Emission Limit Caps used?	No
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Not to Exceed (NTE) Compliance Information

Ambient Operation Region for NTE Testing

and Approach Description

Are you petitioning EPA to exclude operating points from NTE Testing because the engine is incapable of operation at those points? No

Description of how the engine is incapable of operation at the excluded operating points

Limit NTE Testing in a single defined region of speeds and loads? No

Are you requesting approval for an NTE Deficiency No

Engine Description

Engine Combustion Cycle	4 Stroke Compression Ignition
Fuel Options	Single Fuel

Fuel #1

Fuel	7-15 ppm Ultra Low Sulfur Diesel	Fuel (if other)	--
Fuel Metering System	Indirect Diesel Injection		

Certification Summary Information Report

Engine Family	HKBXL719KCC	Model Year	2017
Engine Family Comments --			
Useful Life			
Useful Life of the Engine Family 5 years / 3,000 hrs			
Production Information			
Total Projected Sales	██████████	Federal Projected Sales	████
California Projected Sales	██████████		
Production ██████████	██████████	Production End Date	██████████
Manufacturing plant for these Engines Kubota Japan			
Agents For Service in US Zeal Tajpuria			
U.S. Port of Import Name	City	State	
LONG BEACH	LONG BEACH	California	
SEATTLE	SEATTLE	Washington	
CLEVELAND	CLEVELAND	Ohio	
CHICAGO	CHICAGO	Illinois	
NEW ORLEANS	NEW ORLEANS	Louisiana	
ATLANTA	ATLANTA	Georgia	
MINNEAPOLIS	MINNEAPOLIS	Minnesota	
TACOMA	TACOMA	Washington	
MILWAUKEE	MILWAUKEE	Wisconsin	
NEW YORK	NEW YORK	New York	
INDIANAPOLIS	INDIANAPOLIS	Indiana	
DENVER	DENVER	Colorado	
ATHENS	ATHENS	Georgia	
CHARLOTTE	CHARLOTTE	North Carolina	
LOS ANGELES	LOS ANGELES	California	
KANSAS CITY	KANSAS CITY	Missouri	
ST. LOUIS	ST. LOUIS	Missouri	
MIAMI	MIAMI	Florida	
DALLAS	DALLAS	Texas	
OAKLAND	OAKLAND	California	
PHOENIX	PHOENIX	Arizona	
Manufacturer Comments about this Engine Family			
Running change in 2016MY: New engine code. No affect in emission performance.			

Engine Family	HKBXL719KCC	Model Year	2017
Emission Control Systems			
Non-After Treatment Devices			
Are Non-ATDs used on this Engine Family?	Yes	Non-ATD Types	Engine Design Modification
Additional Comments about these Non-ATDs			
After Treatment Devices			
Are After Treatment Devices used on this Engine Family?	<input checked="" type="checkbox"/>	Will Engine Family be produced using Delegated Assembly?	No
Is the Cost of ATD components included in the cost of engine?	--		
List of Components covered under Delegated Assembly exemption			
Are Infrequent Adjustment Factors being used?	--		
Auxiliary Emissions Control Devices			
Are Auxiliary Emissions Control Devices used on this Engine Family?	<input checked="" type="checkbox"/>		
Adjustable Parameters			
Are Adjustable Parameters used with this Engine Family?	Yes		
Adjustable Parameter #1			
Adjustable Parameter Name	Rated Fuel Rate		
Adjustable Parameter Description			
Adjustable Range: +/- 5.0% Tamper Resistance Method: Pipe (CIHD-2016-041)			

Certification Summary Information Report

Engine Family	HKBXL719KCC	Model Year	2017	
Models and Parts				
Engine Model #1				
Engine Model	D722-D2-EF	Engine Code	D722-D2-EF01	
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.719	
Engine Block Arrangement	Inline			
Number of Cylinders	Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)
3	67	68	15	3600
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)
40.6	3600	3600	40.6	15
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)
2700	5	5	15.2	15.2
Method of Aspiration	Naturally Aspirated			
Number of Aspiration Devices		Aspiration Device Configuration	--	
Turbocharger Type(s)				
Charge Cooler Type	--			
Variable Valve Timing?	No			
Variable Valve Lift?	No			
Number of Inlet Valves per cylinder	1	Number of Exhaust Valves per cylinder	1	
Production and Sales Information				
Sales Area	Both			
Production Start Date		Production End Date		
Engine Parts				
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date
Fuel Injectors	16001-53002	3	01/01/2017	12/31/2017
Fuel Injection Pump	16006-51012	1	01/01/2017	12/31/2017
Fuel Injectors	16871-53002	3	01/01/2017	12/31/2017
Fuel Injection Pump	17549-51014	1	01/01/2017	12/31/2017
Fuel Injection Pump	1G820-51013	1	01/01/2017	12/31/2017
Engine Model #2				
Engine Model	Z482-D2-EF	Engine Code	Z482-D2-EF01	
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.479	
Engine Block Arrangement	Inline			
Number of Cylinders	Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)
2	67	68	10	3600
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)
27.9	3600	3600	27.9	10
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)
2700	5	5	15.4	15.4
Method of Aspiration	Naturally Aspirated			
Number of Aspiration Devices		Aspiration Device Configuration	--	
Turbocharger Type(s)				
Charge Cooler Type	--			
Variable Valve Timing?	No			

Certification Summary Information Report

Engine Family	HKBXL719KCC		Model Year	2017	
Variable Valve Lift?	No				
Number of Inlet Valves per cylinder	1	Number of Exhaust Valves per cylinder	1		
Production and Sales Information					
Sales Area	Both				
Production Start Date	[REDACTED]		Production End Date	[REDACTED]	
[REDACTED]					
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date	
Fuel Injection Pump	16001-51012	1	01/01/2017	12/31/2017	
Fuel Injectors	16001-53002	2	01/01/2017	12/31/2017	
Fuel Injectors	16871-53002	2	01/01/2017	12/31/2017	
Fuel Injection Pump	17548-51014	1	01/01/2017	12/31/2017	
Fuel Injection Pump	1E110-51013	1	01/01/2017	12/31/2017	
Engine Model #3					
Engine Model	Z482-D2-EF		Engine Code	Z482-D2-EF02	
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.479		
Engine Block Arrangement	Inline				
Number of Cylinders	Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)	
2	67	68	10	3600	
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)	
26.3	3600	3600	26.3	10	
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)	
2700	5	5	15.2	15.2	
Method of Aspiration	Naturally Aspirated				
Number of Aspiration Devices			Aspiration Device Configuration	--	
Turbocharger Type(s)					
Charge Cooler Type	--				
Variable Valve Timing?	No				
Variable Valve Lift?	No				
Number of Inlet Valves per cylinder	1	Number of Exhaust Valves per cylinder	1		
Production and Sales Information					
Sales Area	Both				
Production Start Date	[REDACTED]		Production End Date	[REDACTED]	
Engine Parts					
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date	
Fuel Injectors	16001-53002	2	01/01/2017	12/31/2017	
Fuel Injectors	16871-53002	2	01/01/2017	12/31/2017	
Fuel Injection Pump	17548-51014	1	01/01/2017	12/31/2017	
Engine Model #4					
Engine Model	Z482-D2-EF		Engine Code	Z482-D2-EF03	
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.479		
Engine Block Arrangement	Inline				

Certification Summary Information Report

Engine Family		HKBXL719KCC		Model Year		2017	
Number of Cylinders	Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)			
2	67	68	10	3600			
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)			
25.5	3600	3600	25.5	10			
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)			
2700	5	5	14.7	14.7			
Method of Aspiration		Naturally Aspirated					
Number of Aspiration Devices		Aspiration Device Configuration		--			
Turbocharger Type(s)							
Charge Cooler Type		--					
Variable Valve Timing?		No					
Variable Valve Lift?		No					
Number of Inlet Valves per cylinder		Number of Exhaust Valves per cylinder		1			
Production and Sales Information							
Sales Area		Both					
Production Start Date				Production End Date			
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date			
Fuel Injection Pump	16001-51012	1	01/01/2017	12/31/2017			
Fuel Injectors	16001-53002	2	01/01/2017	12/31/2017			
Fuel Injectors	16871-53002	2	01/01/2017	12/31/2017			
Fuel Injection Pump	17548-51014	1	01/01/2017	12/31/2017			
Fuel Injection Pump	19007-51014	1	01/01/2017	12/31/2017			
Fuel Injection Pump	1E110-51013	1	01/01/2017	12/31/2017			
Engine Model #5							
Engine Model		Z482-D2-EF		Engine Code		Z482-D2-EF04	
Displacement Per Cylinder (in liters)		0.24		Total Displacement (in liters)		0.479	
Engine Block Arrangement		Inline					
Number of Cylinders	Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)			
2	67	68	9	3600			
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)			
24.4	3600	3600	24.4	9			
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)			
2700	5	5	14.2	14.2			
Method of Aspiration		Naturally Aspirated					
Number of Aspiration Devices		Aspiration Device Configuration		--			
Turbocharger Type(s)							
Charge Cooler Type		--					
Variable Valve Timing?		No					
Variable Valve Lift?		No					
Number of Inlet Valves per cylinder		Number of Exhaust Valves per cylinder		1			
Production and Sales Information							
Sales Area		Both					
Production Start Date		01/01/2017		Production End Date		12/31/2017	

Certification Summary Information Report

Engine Family	HKBXL719KCC		Model Year	2017	
Engine Parts					
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date	
Fuel Injection Pump	16001-51012	1	01/01/2017	12/31/2017	
Fuel Injectors	16001-53002	2	01/01/2017	12/31/2017	
Fuel Injectors	16871-53002	2	01/01/2017	12/31/2017	
Fuel Injection Pump	17548-51014	1	01/01/2017	12/31/2017	
Fuel Injection Pump	19007-51014	1	01/01/2017	12/31/2017	
Fuel Injection Pump	1E110-51013	1	01/01/2017	12/31/2017	
Engine Model #6					
Engine Model	Z482-D2-EF		Engine Code	Z482-D2-EF05	
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.479		
Engine Block Arrangement	Inline				
Number of Cylinders	Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)	
2	67	68	7	2600	
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)	
26.4	2600	2600	26.4	7	
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)	
1950	5	5	14.3	14.3	
Method of Aspiration	Naturally Aspirated				
Number of Aspiration Devices	Aspiration Device Configuration		--		
Turbocharger Type(s)					
Charge Cooler Type	--				
Variable Valve Timing?	No				
Variable Valve Lift?	No				
Number of Inlet Valves per cylinder	1	Number of Exhaust Valves per cylinder	1		
Production and Sales Information					
Sales Area	Both				
Production Start Date			Production End Date		
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date	
Fuel Injection Pump	16001-51012	1	01/01/2017	12/31/2017	
Fuel Injectors	16001-53002	2	01/01/2017	12/31/2017	
Fuel Injectors	16871-53002	2	01/01/2017	12/31/2017	
Fuel Injection Pump	17548-51014	1	01/01/2017	12/31/2017	
Fuel Injection Pump	19007-51014	1	01/01/2017	12/31/2017	
Fuel Injection Pump	1E110-51013	1	01/01/2017	12/31/2017	
Engine Model #7					
Engine Model	Z482-D2-EF		Engine Code	Z482-D2-EF06	
Displacement Per Cylinder (in liters)	0.24	Total Displacement (in liters)	0.479		
Engine Block Arrangement	Inline				

Number of Cylinders		Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)
2		67	68	8	3000
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)	
26.4	3000	3000	26.4	8	
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)	
2250	5	5	14.6	14.6	
Method of Aspiration		Naturally Aspirated			
Number of Aspiration Devices		Aspiration Device Configuration		--	
Turbocharger Type(s)					
Charge Cooler Type		--			
Variable Valve Timing?		No			
Variable Valve Lift?		No			
Number of Inlet Valves per cylinder		Number of Exhaust Valves per cylinder		1	
1					
Production and Sales Information					
Sales Area		Both			
Production Start Date		Production End Date			
Engine Parts					
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date	
Fuel Injection Pump	16001-51012	1	01/01/2017	12/31/2017	
Fuel Injectors	16001-53002	2	01/01/2017	12/31/2017	
Fuel Injectors	16871-53002	2	01/01/2017	12/31/2017	
Fuel Injection Pump	17548-51014	1	01/01/2017	12/31/2017	
Fuel Injection Pump	19007-51014	1	01/01/2017	12/31/2017	
Fuel Injection Pump	1E110-51013	1	01/01/2017	12/31/2017	
Engine Model #8					
Engine Model		Z482-D2-EF	Engine Code		Z482-D2-EF07
Displacement Per Cylinder (in liters)		0.24	Total Displacement (in liters)		0.479
Engine Block Arrangement		Inline			
Number of Cylinders		Bore (mm)	Stroke (mm)	Rated Power (kW)	Rated Speed (RPM)
2		67	68	5	1800
Maximum Torque (N*m)	Speed at Maximum Torque (RPM)	Maximum Speed Test (RPM)	Torque at Maximum Speed (N*m)	Maximum Engine Power (Kw)	
24.4	1800	1800	24.4	5	
Intermediate Test Speed (RPM)	Lower Tolerance of Maximum Power (%)	Upper Tolerance of Maximum Power (%)	Fuel Rate at Maximum Torque (mm3/stroke)	Fuel Rate at Rated Speed (mm3/stroke)	
1350	5	5	13.6	13.6	
Method of Aspiration		Naturally Aspirated			
Number of Aspiration Devices		Aspiration Device Configuration		--	
Turbocharger Type(s)					
Charge Cooler Type		--			
Variable Valve Timing?		No			
Variable Valve Lift?		No			
Number of Inlet Valves per cylinder		Number of Exhaust Valves per cylinder		1	
1					
Production and Sales Information					
Sales Area		Both			
Production Start Date		Production End Date			

Certification Summary Information Report

Engine Family	HKBXL719KCC	Model Year	2017	
Engine Parts				
Part Name	Part Number	Part Quantity	Part Usage Start Date	Part Usage End Date
Fuel Injection Pump	16001-51012	1	01/01/2017	12/31/2017
Fuel Injectors	16001-53002	2	01/01/2017	12/31/2017
Fuel Injectors	16871-53002	2	01/01/2017	12/31/2017
Fuel Injection Pump	17548-51014	1	01/01/2017	12/31/2017
Fuel Injection Pump	19007-51014	1	01/01/2017	12/31/2017
Fuel Injection Pump	1E110-51013	1	01/01/2017	12/31/2017
Durability Information				
DF Determination Factor	Determined by Manufacturer			
Durability Engines				
Engine Name	Engine Code	Engine Id	Engine Service Accumulation in hours	
D1305-EF	D1305-EF01	6L2992	1520	
Deterioration Factors				
Pollutant Name	Deterioration Factor		Deterioration Factor Type	
Carbon Monoxide	0		Steady-State Additive	
Nitrogen Oxides	0		Steady-State Additive	
Particulate Matter	0		Steady-State Additive	
Non-Methane Hydrocarbons	0		Steady-State Additive	

Certification Summary Information Report

Engine Family	HKBXL719KCC	Model Year	2017		
Carryover Test Information					
Test Dataset #1					
Test Data Type	Test data for a current engine model in this Engine Family				
Verify Test Dataset Number	DKBXML0001981	Manufacturer Test Dataset Number	A4620418		
Engine Model	Z482-D2-EF	Engine Code	Z482-D2-EF01		
Engine Id	CE0538	Engine Displacement (in liters)	0.479		
Number of hours Engine was run prior to test	20	Crankcase Emission Discharge Path	CCEs Routed into the Air Inlet System		
Test Date	06/11/2012				
Test Fuel	7-15 ppm Ultra Low Sulfur Diesel				
Special Test Procedure Used	No				
Test Lab Name	Kubota Corporation - EEMPD	Test Lab Code	2		
Engine Operation	Constant Speed	Steady-State Cycle Type	Steady-State 5-Mode Cycle		
Steady-State Modal Testing Type	Ramped-Modal Testing	Steady-state Cycle Work (kW-hr)	--		
Transient Test Required	No				
Transient Hot Start Cycle Work (kW-hr)	--	Transient Cold Start Cycle Work (kW-hr)	--		
Devices Regenerated during Steady State Test (Ramped Model)	None				
Devices Regenerated during Cold Start of a Transient Test	None				
Devices Regenerated during Hot Start of a Transient Test	None				
Test Comments					
Manufacturer's Assigned Test Data No.: A4620418(RMC) tested on 06/11/2012					
Steady-State Ramped Modal Test Results					
Pollutant Name	Test Result (Initial) (g/kW-hr)				
Non-Methane Hydrocarbons	0.548				
Carbon Dioxide	1012.4				
Nitrogen Oxides	5.48				
Carbon Monoxide	2.517				
Particulate Matter	0.212				
Nitrogen Oxides plus Non-Methane Hydrocarbons	--				
Methane	0.003				
Certification Level Steady-State Ramped Modal Test Results					
Pollutant Name	Test Result (Adjusted) (g/kW-hr)	Certification Emission Result (g/kW-hr)	EPA Standard Limit (g/kW-hr)	Family Emission Limit (g/kW-hr)	Pass/Fail Indicator
Methane	0.003	0.00	--	--	--
Carbon Monoxide	2.517	2.5	6.6	--	Pass
Nitrogen Oxides plus Non-Methane Hydrocarbons	--	6.0	7.5	--	Pass
Particulate Matter	0.212	0.21	0.40	--	Pass
Nitrogen Oxides	5.48	5.48	--	--	--
Non-Methane Hydrocarbons	0.548	0.55	--	--	--
Carbon Dioxide	1012.4	1,012.40	--	--	--